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DISCUSSION

MR. SCHILLER'S LOGIC¹

PEOPLE who are trying to teach formal logic ought to read Mr. Schiller's book. It is a loud statement of all their difficulties, and will give them somewhat the same comfort that profanity would. It will also give them at least one piece of good news, even though they may not accept the main thesis. The main thesis is that all their "difficulties" arise from the fact that "It is *not* possible to abstract from the actual use of the logical material and to consider 'forms of thought' in themselves, without incurring a total loss, not only of truth but also of meaning." The piece of good news is independent of that dogma, however. It is this—that logic is *either* dead, in which case it is some day going to be buried, or *else* alive, in which case it is some day going to begin to grow.

This would not appear a great piece of news to persons of outdoor intelligence; but to the custodians of formal logic it will come like a child to the barren. After all these years something may yet happen some day; that is the great affirmative message of Mr. Schiller's book. And he backs it up, as it would need backing to convince anybody, by some very cogent arguments. I recommend especially a brilliant chapter on "The Laws of Thought," and one on "The Theory of Ideas," which concludes as follows: "If logicians had taken the precaution of examining the psychological process of judging before constructing their theories, they could hardly have failed to observe that the characteristic features in our intelligence are not 'things' but *processes*. Perception is a process, thinking is a process, meaning is a process, attention is a process, and 'ideas' are—a misinterpretation of processes. . . . The right name for the theory of 'ideas' is the theory of judgment."

These are the statements that give us hope either of the burial or the growth of logic. Mr. Schiller advocates its burial, but I expect its growth. I do not see why logic should not enter into the great change with all the other topics, one by one, since Darwin—or since, in the last century, we all recovered from the "madness" of the "friends of ideas," and returned to the more healthy wisdom of Heraclitus. And it is because I believe this that I wish to make more than a review of Mr. Schiller's book. I wish to oppose it from the standpoint of an hypothesis about knowledge, not deeply different from his own. I wish to prove, indeed, that that hypothesis (which puts value above truth) does not involve the acceptance of Mr.

¹ "Formal Logic: A Scientific and Social Problem," F. C. S. Schiller, M.A., D.Sc. London: Macmillan and Co., 1912.

Schiller's dogma about formal logic—any more than it involved a real acceptance of Mr. James's books about "Pragmatism," great and originating as they were. It does involve, in fact, and ultimately depend upon, a more sustained scepticism of intellect than any of these books reveal.

If knowledges are the successful postulates for specific purposes, of uniformities in experience, as Mr. Schiller professes to believe they are, then his method of attack upon the knowledges of logic is profoundly wrong. It is indeed intellectualistic, absolute, and academic.

In his introduction he declares that it is necessary to pull down this "pseudo-science" of formal logic before it will be possible to build up a logic of science and practical life. And is that not the typical academic assumption that fills our libraries with rubbish and gas? Everybody who thinks in our day, thinks about books, and that is the whole reason for the inferiority of our thoughts. Why must the logic of our science and practical life be but a negative graft upon the logic of Greek science and practical life? Their logic was great and dominating because it was a study of experience; our logic is petty and inconsequent because it is a study of their logic. I should say that it will be impossible for any one to build up a logic of science and practical life, after he has corrupted his mind with all the scholarship necessary to an elaborate attack upon the logic of the past.

Only because he leads off with this conventional assumption that no new knowledge can be created except in relation to the knowledge which is now respectable, does Mr. Schiller find himself under the necessity of proving a relation of entire contrariety. He finds himself under the necessity of establishing his negative dogma, that formal logic is "incoherent, worthless, and literally unmeaning." But to condemn an early science for its incoherence is intellectualistic in the extreme. And to declare any knowledge which, by his own confession, has lent support and satisfaction to the undertakings of intellect for many centuries "literally unmeaning," is not wise in one who intends to support his attack with such a description of meaning as Mr. Schiller gives. It is not wise in one who intends to declare that "an exhaustive catalogue of the meanings of judgments . . . would involve a reference to the actual context, and a psychological study of each assertor's state of mind" (p. 135).

In one place, indeed, Mr. Schiller himself pays an unconscious tribute, both to the meaning and to the *true* meaning of his pseudo-science, for he says: "The mistake was pardonable in Plato, who . . . lived before Aristotle had discovered the Syllogism; it is inexcusable in philosophers who . . . professed to have studied and grasped Formal Logic" (p. 345). The truth is, it is as hard for an academic

mind to adopt the philosophy of outdoor wisdom, as it is for a camel to enter into the kingdom.

Nevertheless, if Mr. Schiller's eyes were wholly open to this great, democratic, and system-wrecking philosophy he has got hold of, and if he had made a deliberate effort, I believe he might have applied it with profit to a negative criticism of formal logic. He might have asked himself: What are the uniformities postulated by this knowledge; to what purposes were they, and are they, relevant; and to what extent do they lend themselves to these purposes? And by this means he might have wrought a great service to the memory of Aristotle, even if no more living enthusiasm could be furthered in these days of open revolution, by a "radical reform of the *Predicables*."

Had he approached it in this equilibrium of mind, he would not have been compelled, like a prosecuting attorney, by the intellectual purpose that retained him, to make logic appear at its very worst. This logic Mr. Schiller writes of, having no real definition of the word "formal," no demarkation between formal reasoning and scientific induction, no separate recognition of probability, containing such expressions as "valid conclusion," "formal truth," and professing to be a complete account of "actual thinking," or "real reasoning"—such a logic was forgotten many years ago in the little college where I studied. It does not require a humanist, but only a man of sound mind, to perceive the purely honorific value of an expression like "formal truth." I can not speak for Oxford, but, in those parts I can speak for, a great deal of the logic which Mr. Schiller annihilates did not exist.

But a logic did exist, and does still, which, although containing many truths that are relevant to human purposes, is in sad confusion with itself, having been once too proud and having suffered a humiliation at the hands of science, and not knowing now to what purposes its truths are relevant, nor which truths to which purposes. If Mr. Schiller had approached this logic with the humble questions which his own definition of knowledge suggests, he might have drawn some conclusions which would themselves have been humbly relevant to the purposes of education, and therein true.

Perhaps the chief of these conclusions would have been this: that all the part of logic properly called "formal" is an austere development of the standard of consistency in generalization, relevant especially to the purposes of argument, but also furnishing one of the many ideals of science and practical life.² The standard of con-

² On page 309 Mr. Schiller speaks of "*the true ideal of science*," again revealing his own failure to adopt the philosophy of specific purposes. (Italics are mine.)

sistency is never once mentioned throughout Mr. Schiller's book, except when its value and relevance to science are *assumed* for the purpose of condemning the inconsistencies of the logic he attacks. And it is only because of this silence, I believe, that he was able to write the first half of his book at all—or plausibly enough to pass the eye of the printer.

The ideal of consistency in generalization, or the purpose (we might say) to "abstract from the actual context in which [general] assertions grow up, viz., the time, place, circumstances, and purpose of the assertion and the personality of the assertor,"³ in order to discover whether the said assertions can be foredoomed to success or failure by comparison with other assertions already established, the energy of experiment thus being saved,—did not come into the world with Aristotle. It came into the world with the beginnings of conversation. And it was not first formulated by Aristotle either, but by a man of greater natural wisdom if less scholarship, Heracleitus. He could see the eternal change of purposes (as well as things), and yet declare the eternal value of abstracting from them, the eternal value of the ideal of consistency, or rationality, or the common, in a flux of opinions. In that vision the true formal logic had its birth, and in that it will have its regeneration. Formal logic is not, as Mr. Schiller presents it, a denial of the pervasiveness of emotional purpose, but it is an affirmation of it, and a caution on account of it, and a system of standards for making that caution effective. If a man with *specific* purposes makes a *general* statement (even though that man should be *yourself*) distrust him. Test him by the standards of consistency. That is what the "formal" chapter in a reborn logic probably will say.

And it will reassure those who believe this, to observe that almost every instance which Mr. Schiller adduces of "extra-logical" thinking, does not concern a general, but a specific assertion.⁴ The conclusion from all these instances, therefore, is that the standards of formal logic relate to generalization and abstract argument, not that they relate to nothing actual at all. They relate particularly to such a work as Mr. Schiller's, and we can not say that tested by them it would always stand. In many passages his thinking falls too far away from an ideal consistency to hold a mind that has been disciplined by Aristotle.⁵

³This is Mr. Schiller's own derisive description of what formal logic tries to do (page 374).

⁴Cf. pages 10, 13, 88, 129, 186, and many others.

⁵I quote this foot-note from page 257, as a brief, and, I think, glaring example of the kind of sophistry that formal logic would condemn forever. It is a misinterpretation of, or what is worse a misinterpolation in, a quotation from Mill.

It may be that this discipline in its regenerate form will not contain much of the syllogism. And yet, to one who understands the nature of the test he is applying, it need not appear ridiculous to shift his general statements into various rigid forms. It is but a scientific development of the common-sense procedure of saying, "Now sit down, and let us find out exactly what you mean!" It is useful when there is earnest doubt about one's reasonings, or when one is teaching to a child the ideal of consistent thought. In education, and in genuine doubt, our ideal standards⁶ become relevant, and it is not impossible to make any of them appear ridiculous, by dragging them in at inappropriate times.

Mr. Schiller himself has declared (p. 222) that the syllogism "still retains an important critical function. . . . To put an argument in syllogistic form is to strip it bare for logical inspection." But he has slipped over with the art of a thimble-rigger that word "logical." What is "logical inspection," indeed, if it is not inspection as to consistency with other generalizations established at other "times," or other "places," in other "circumstances," for other "purposes," or by other "personalities"? That is what Heraclitus recommended. That is what, besides perfecting argument for its own sake, the exercises of formal logic seek to effect. Even for that function, they need improvement, *but the chief improvement that they need is a definite determination to that function and no other.* And this they will never acquire through a criticism that is conducted in the all or nothing method of the church and the academy.

There are two ways in which philosophers contribute strength to the new theory of knowledge. One is to write books which, al-

"There is no science which will enable a man to bethink himself of that which will suit his purpose. But when he *has* thought of something' (which 'will suit his purpose' presumably!) 'science can tell him whether that which he has thought of will suit his purpose or not.' *I. e.*, when he has found out without logic, logic can tell him he has done right! What admirable caution! And yet how true to all Formal Logic."

When irreverent critics are at the same time careless, formal logic is well able to take her own revenge upon them. And she takes it with peculiar sharpness upon Mr. Schiller, just as he is "disposing of" the last of the material fallacies. It is the fallacy of "Many Questions." And no sooner has he got it thoroughly "disposed of," no sooner has he well laid it down that there should not be any such fallacy, than he is moved (surely by the devil himself) to add in a foot-note: "Why should there not be a Fallacy of the Unmeaning Question, etc., as well as of Many Questions?" The italics are mine—or they are Aristotle's!

⁶This is recognized in regard to mathematics, and the reason given is that mathematics more readily concedes its ideal character (cf. footnotes, pages 249 and 320). This might have suggested that the real fault in logic is not that it exists, but that it does not concede its ideal character.

though they make the old profession of absolute verity, reveal to scrutiny the control of a specific purpose. Mr. Schiller's book is of this kind. The other way is to write books which profess their purpose and present their verity as only relative to that.⁷ They exemplify not only the fact of how our thought proceeds, but also the ideal for its procedure, which rises from a recognition of the fact. They face their own music. And they are more different from the others, than the new theory is from the old. The control of thinking by a purpose unavowed is prejudice or hypocrisy, but the control of thinking by an avowed purpose is wisdom itself.

And in his chapters on "Induction," Mr. Schiller sometimes achieves wisdom. He forgets the ever-hidden purpose of the dogmatist, and simply endeavors to generalize the facts of scientific procedure toward his own avowed hypothesis about knowledge. The chapters on "Causation," "Laws of Nature," "The Forms of Induction," "The Problem of Induction," The "Social Effects of Formal Logic," are of high value. In them one finds many passages where, to use the language of the author's own ideal, "postulation occurs with a clear consciousness of the scientific nature of its aims," and "the reasoning will be found to run somewhat as follows: 'I have made such and such observations and they *could* be generalized in such and such ways; of these this one would be the most convenient . . .'" (p. 243).

These passages—interrupted though they are by others where postulation occurs with obscure consciousness of the aim to establish at any cost an academic dogma—are so excellent and forceful in themselves, that for them, even more than for the other reasons I gave, I think this book ought to be read by all who teach logic.

And let them be both perspicuous and merciful in the reading, and not reject the value theory of knowledge, merely because the author so little succeeds in exemplifying it. Few philosophers, to say nothing of scholars, will ever succeed in that. For the theory strongly opposes that intellectual gullibility which makes philosophy possible. There is a kind of noble paradox between believing it, and even stating it as true. It posits a heroic doubt, not only as the first, but also as the last condition of the mind that seeks to know.

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⁷ John Dewey's "How We Think," which I reviewed in this JOURNAL, Vol. VIII., page 244, is—so far as I know—the only book of this kind that has come from the hands of those who hold the new theory of knowledge.